

REMARKS/ARGUMENTS

Applicants thank the Examiner for consideration of the Information Disclosure Statement filed by Applicants on October 20, 2008.

By this amendment, Claim 50 is amended and Claims 51-56 are added. No Claims have been canceled. Therefore, Claims 1-2, 5-10, 13-28, 30-44 and 46-50 are pending in the application.

Claim 50 is amended to correct a minor informality. Applicants request entry of the amendment to Claim 50 pursuant to 37 CFR § 1.116(b)(2) as the amendment presents the pending claims in better form for consideration on a possible appeal.

Support for new Claims 51 and 53 can be found in Applicants' specification taken as a whole including, for example, in paragraphs [0045]-[0048]. (See e.g., paragraph [0048] stating "The transformation engine 206 calls the referenced routine to facilitate conversion of "Oracle Corporation" to "ORCL" and packages the data according to the format specified for the particular web service.")

Support for new Claims 52 and 54 can also be found throughout Applicants' specification. (See e.g., paragraph [0047] stating "Generally, if certain information is needed to invoke a web service and that information is not provided by the invoking application, transformation information 202 includes a road map as to how to obtain or derive the necessary information.")

New Claims 55 and 56 correspond to previously canceled Claims 3 and 11.

Each issued raised in the Office Action mailed December 8, 2008 ("Office Action") is addressed hereinafter.

CLAIM REJECTIONS – 35 U.S.C. § 102

Claims 1-2, 5-10, 13-28, and 30-44 and 46-50 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Pat. Pub. No. 2002/0156685 ("*Ehrlich*"). Applicants respectfully traverse.

To anticipate a claim of the present application, *Ehrlich* must teach or reasonably suggest "each and every element" of the claim "in as complete detail as is contained in the claim". MPEP § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987; *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)) Further, while the claim may be given its "broadest reasonable interpretation" for the purposes of making an anticipation determination, the interpretation must be "consistent with the specification" and must be "consistent with the interpretation those skilled in the art would reach." MPEP § 2111 (citing *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005); *In re Cortright*, 165 F.3d 1353, 1359 (Fed. Cir. 1999)).

CLAIM 1

Present Claim 1 recites, in part:

1. A method for handling requests for web services, the method comprising the computer-implemented steps of:
receiving at a web services broker, from a particular instance of a client application, a request for information, wherein said request includes an identification of a particular web service from which said particular instance wants said requested information, **the request having first input data, the first input data being in a form that cannot be used by said particular web service to service requests for said information;**

* * *

in response to receiving said request, the web services broker

accessing, based on said identification of said particular web service,
transformation information that specifies,
**how to transform said first input data associated with said request to
second input data that said particular web service can use to
service requests for said requested information,** and
how to invoke said particular web service in a manner required by said
particular web service, to obtain said requested information from
said particular web service;
transforming said first input data to said second input data; and
invoking, in said manner required by said particular web service, said particular
web service to obtain said requested information from said particular web
service.

Applicants respectfully submit that at least the above-bolded features of Claim 1 are not taught or in any way suggested by *Ehrlich*.

Claim 1 makes clear that the request from the client application includes (1) an identification of the particular web service from which the client application wants the requested information and (2) input data that is in a form that cannot be used by the particular web service. Based on the identification of the particular web service, the web services broker accesses transformation information that specifies how to transform the input data so that the particular web service can use the transformed input data to provide the requested information.

The method of Claim 1 may be useful, for example, to allow de-coupled application development of the client application and the particular web service. For example, a first team of engineers could develop and deploy the client application without concern to what form the particular web service expects the input data to be in. An entirely different team of engineers, at a later time, could then deploy the web services broker along with transformation information that brokers requests from the client application to the particular web service. Specifically, since

the web service broker is not in control of how the client application forms the input data the web services broker provides transformation information that specifies how to transform input data provided by the client application to produce transformed input data that can be used by the particular web service.

EHRLICH'S VIRTUAL SHOPPING CART SYSTEM

In contrast to the web services broker of Claim 1, *Ehrlich's* shopping system is in control of the form of the input data provided by shoppers ("users") of the shopping system. For example, *Ehrlich's* shopping system provides a user interface that allows a user to search for purchase items, add items to a virtual shopping cart, and submit a purchase request to purchase items added to the shopping cart. Since *Ehrlich's* shopping system provides the interface by which a user submits requests, such as purchase requests, to the shopping system, *Ehrlich's* shopping system is in control of the form of the input data included in the requests.

Not surprisingly then, *Ehrlich's* does not teach or suggest "how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information", as featured in Claim 1. *Ehrlich* does describe a "protocol broker" that "chooses for each purchase request, the most appropriate **protocol** and **communication mode**" for communicating with a merchant site. (Emphasis added.) (*Ehrlich*, [0080]). For example, the protocol broker may choose to communicate with a merchant site using the Hypertext Transfer Protocol (HTTP) or the Simple Object Access Protocol (SOAP). (*Id.*) However, Claim 1 is not just about transformation information that specifies "how to invoke" a particular web service but is also about transformation information that specifies "how to transform" input data provided from a client application. In other words,

changing the form of delivery of a message is entirely different from transforming the message itself.

Further, *Ehrlich's* communication schema does not specify "how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information", as featured in Claim 1. *Ehrlich* describes creating a "communication schema" for each merchant that indicates "the required protocol" and "has place holders for the item ID, session ID, etc." (Emphasis added.) (*Ehrlich*, [0088]). "During the purchase request, the protocol broker replaces the place holders with the actual values or items required by the merchant..." (*Id.*) Thus, while *Ehrlich's* protocol broker may replace the place holders with input data from the purchase request, *Ehrlich* does not describe transforming the input data in a purchase request from input data that the merchant site cannot use into transformed input data that the merchant site can use. Indeed, given that the *Ehrlich's* shopping system is in control of the form of the purchase request from the shopper, one skilled in the art would conclude that the input data in the purchase requests is in a form that the merchant site can use. In contrast, Claim 1 expressly requires that the first input data be in a form "that cannot be used by said particular web service to service requests for said information".

Based on the foregoing, Applicants respectfully submit that *Ehrlich* does not teach or suggest at least one feature of Claim 1. Claim 49 recites similar features and is allowable over *Ehrlich* for the same reasons.

CLAIM 2

Claim 2 depends from Claim 1 and is therefore allowable over *Ehrlich* for the reasons given above with respect to Claim 1. In addition, Claim 2 recites additional features that independently render Claim 2 patentable over *Ehrlich*. For example, Claim 2 recites:

receiving, from said particular web service, said requested information; and transforming, based on said transformation information, said requested information to data that said client application can use.

Thus, in Claim 2, the **requested information** received from the particular web service is transformed to data that the requesting client application can use. The Office Action contends that these features specific to Claim 2 are satisfied by *Ehrlich* at paragraph [0079]. The cited portion of *Ehrlich* describes only creating purchase **requests** that merchants can understand. Nothing in the cited portion of *Ehrlich* or elsewhere in *Ehrlich* describes the protocol broker transforming, based on accessed transformation information associated with a merchant, information received from the merchant site into data that user or shopper can use. In other words, *Ehrlich* describes only one-way transformations (requests from client to service) while Claim 2 is about two-way transformations (transformations of requests from client to web service **and** transformations of responses returned from the web service to the client). Thus, Claim 2 recites additional features that independently render Claim 2 patentable over *Ehrlich*.

CLAIM 5

Claim 5 recites:

The method of Claim 1, wherein said transformation information includes a mapping of **first input data from a first particular client** application to **second input data** that a first web service can use, and a mapping of **first input data from a second particular client** application to **said second input data** that said first web service can use, and wherein said first input data from said first particular client application has a **different form** than said first input data from said second particular client application. (Emphasis added.)

Claim 5 is about a many-to-one transformation. In particular, Claim 5 features transformation information for mapping, to the same "second input data", input data from two clients, where the form of the input data from one client is different from the form of the input data from the other client. In contrast, in *Ehrlich*, purchase requests for a particular item from a particular merchant will have the same form (i.e., the form will not vary from client to client). For example, using an example provided in *Ehrlich*, the form of the input data in the purchase request for the book titled "Professional Active Server Pages 3.0" described in paragraphs [0101]-[0112] of *Ehrlich* would be same regardless of which user or shopper submitted the purchase request. Thus, it would not make sense for *Ehrlich*'s protocol broker to use transformation information like the transformation information featured in Claim 5 that maps, to the same "second input data", input data from two clients, where the form of the input data from one client is different from the form of the input data from the other client. Consequently, Applicants respectfully submit that Claim 5 recites additional features that independently render Claim 5 patentable over *Ehrlich*.

CLAIM 17

Claim 17 recites:

17. A method for handling requests for web services, the method comprising the computer-implemented steps of:
 - receiving at a web services broker, from a particular instance of a client application, a request for information, **wherein said request includes an identification of a particular instance of said client application**, the request having first input data, the first input data being in a form that cannot be used by a particular web service to service requests for said information;
 - wherein the particular web service serves as the source of said requested information and is separate from the web services broker;

wherein the client application is separate from the web services broker and does not have logic for directly interacting with said particular web service;

in response to receiving said request, based on said identification of said particular instance of said client application, the web services broker accessing transformation information;

wherein said transformation information includes a mapping between said identification of said particular instance of said client application and an identification of said particular web service, the mapping indicating that said particular instance prefers said particular web service to service requests from said particular instance for said requested information;

wherein said transformation information specifies how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information; and

based on said transformation information, the web services broker transforming said first input data to said second input data.

Applicants respectfully submit that at least the above-bolded features of Claim 17 are not taught or in any way suggested by *Ehrlich*.

Claim 17 makes clear that the request from the client application includes:

- (A) an identification of **the particular instance of the client application** AND
- (B) input data that is in a form that cannot be used by a particular web service.

Based on the identification of the particular instance of the client application, the web services broker accesses transformation information that specifies:

- (1) a mapping between the identification of the instance of the client application and an identification of a particular web service from which the instance of the client application **prefers** to receive the requested information AND

(2) how to transform the input data so that the particular web service can use the transformed input data to provide the requested information.

Thus, in Claim 17, a mapping in the transformation information accessed by the web services broker specifies the web service from which the instance of the client application prefers to receive the requested information.

The Office Action contends that *Ehrlich's* "merchant protocol data" is equivalent to the transformation information of Claim 17. (See Office Action, page 6). However, the merchant protocol data retrieved from the merchant schema database of *Ehrlich* corresponds to the **merchant** specified in the purchase request and not the particular instance of the client application that sent the purchase request. For example, paragraph [0113] of *Ehrlich* states with respect to an example purchase request "[t]he protocol broker analyzes and parses the SOAP purchase request, retrieves the merchant protocol data for A1Books.com from the merchant schema database 120..." In this example, "A1Books.com" identifies the merchant, not the particular instance of the client application that sent the purchase request. In contrast, Claim 17 expressly requires that the "in response to receiving said request, **based on said identification of said particular instance of said client application**, the web services broker accessing transformation information". *Ehrlich* does not teach or suggest this feature of Claim 17 at least because nothing in *Ehrlich* describes accessing merchant protocol data based on an identification of the particular instance of the client application making a purchase request.

Furthermore, Claim 17 recites the following feature that is similar to features recited in Claim 1 discussed above:

wherein said transformation information specifies how to transform said first input data associated with said request to second input data that said particular web service can use to service requests for said requested information; and

based on said transformation information, the web services broker transforming said first input data to said second input data.

For the reasons given above with respect to Claim 1, Applicants respectfully submit that *Ehrlich* also does not satisfy the above features of Claim 17.

Based on the foregoing, Applicants respectfully submit that *Ehrlich* does not teach or suggest at least one feature of Claim 17. Claim 50 recites similar features and is allowable over *Ehrlich* for the same reasons.

REMAINING CLAIMS

The pending claims not discussed so far are dependant claims that depend on an independent claim that is discussed above. Because each dependant claim includes the features of claims upon which they depend, the dependant claims are patentable for at least those reasons the claims upon which the dependant claims depend are patentable. Removal of the rejections with respect to the dependant claims and allowance of the dependant claims is respectfully requested. In addition, the dependent claims introduce additional features that independently render them patentable. Due to the fundamental differences already identified, a separate discussion of those features is not included at this time.

CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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